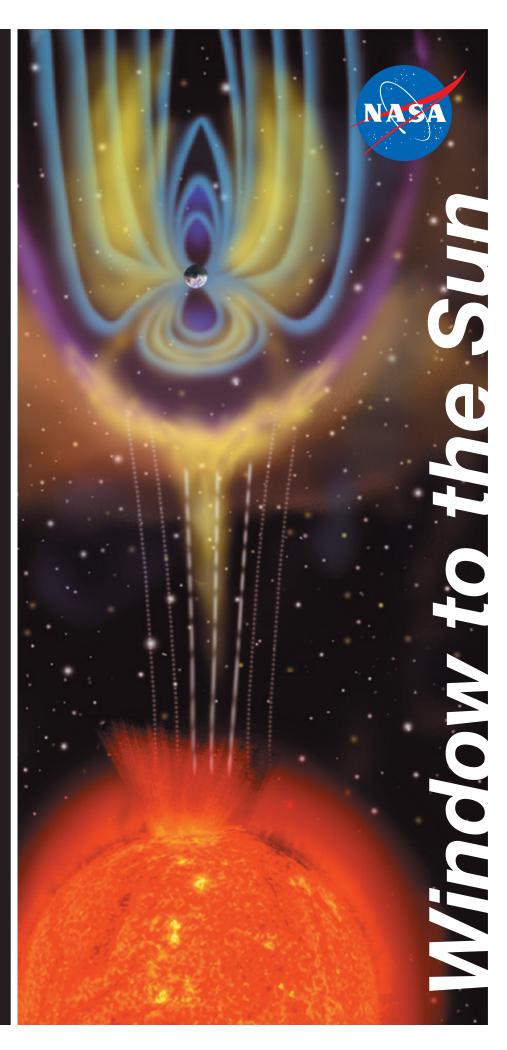
National Aeronautics and Space Administration

WWW.NASA.GOV

Season 2005: Volume 3 http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov

http://stargazers.gsfc.nasa.gov

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# **Space Weather Challenge featuring STEREO**

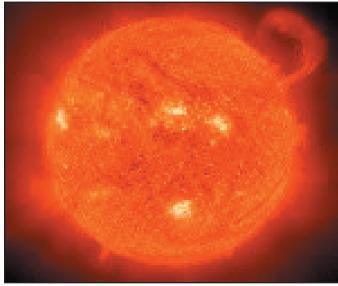


Image from the SOHO spacecraft. Credit: NASA/ES

Introducing the STP/LWS Space Weather Challenge featuring STEREO - a virtual science and engineering event for middle and high school students and their teachers!

For details, please visit our website at: http://stargazers.gsfc.nasa.gov. The Challenge details are available in English and Spanish.

This challenge is sponsored by NASA's Living With a Star (LWS) & Solar Terrestrial Probes (STP) Education & Public Outreach program which provides educational resources to educators and students.

NASA Scientists and Engineers developed this challenge to expand student knowledge about the science of understanding Our Star the Sun.

Students will learn even more about this exciting research when NASA launches the STEREO (Solar TErrestrial RElations Observatory) Spacecraft in 2006. These 2 identical spacecraft will be the first ever to capture 3-D images of the sun and the incredible power of Coronal Mass Ejections (CME's). For more information, visit: http://stereo.gsfc.nasa.gov.

- Contributed by Laura Ratta (Laura.A.Madachy.1@gsfc.nasa.gov)

#### At a Glance

Science Challenge featuring STEREO		
Activity Type	Science Challenge	
Participants	Formal Educators	
Outreach	500	
Grade Levels	7-12	
Location	Cyberspace	
Dates	09/30/05 - 10/31/05	
Activity's Goals		
Education Outreach		

SEC Connection: To expand teacher and student understanding of Space Weather, CME's and the STEREO Mission.

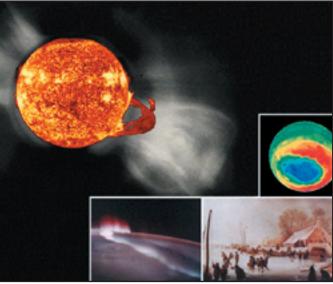
"Cool project! Balancing is happening! Some of the students are still in troubleshooting mode - getting frustrated. One student said "I don't like this engineering stuff" and then went on to solve her groups balancing issues. I like this project!" Tara Kisiel, Hampshire Regional High School, Westhampton, Massachusetts

#### Challenge Overview

- Over 200 student groups from across the country have registered to participate in this years challenge. One of the participating schools, Fox Meadow Middle School in Colorado Springs, CO is also becoming a NASA Explorer school this year!
- There are 2 different challenges the Engineering Challenge for Middle School students involves constructing and balancing a model of the actual STEREO Spacecraft and the Science Challenge aimed at High School students asks them to discuss how STEREO will be used to understand Solar Energetic Particles (SEP) or to propose a new SEC spacecraft!
- Each Challenge presents students with a problem to solve along with scientific background and other resources.
- Each student who completes the Challenge will receive a certificate from NASA! Final projects are due October 31st so stay tuned for the results!
- For details, please visit our website at: http://stargazers.gsfc.nasa.gov

For More Information on the Challenge: http://stereo.gsfc.nasa.gov http://stargazers.gsfc.nasa.gov

## **Solar Backpacks**



Superposed Skylab coronograph and He 304 Å images; ozone concentration from TOMS; Brueghel painting of skaters during the "Little Ice Age" when solar activity was low; auroral curtain triggered by a solar storm.

Solar Backpacks - The "Solar Backpack" program, ongoing, continues. The Solar-Backpack is a backpack filled with solar-related activities designed for families with kids ranging in age from 5 through early teens. The backpacks are checked out for free and carried throughout the center for the families to conduct activities on their own. The activities include: building a wristwatch sundial; experimenting with UV bead bracelet; real-time day/night Earth globe; solar cell powered motor; felt layer model of the Sun's atmosphere; and Sun Earth size/distance scale demonstration.

Daytime Solar Viewing/"Sunspotting": "Sunspotting" continues on the weekend. Chabot's Sunspotters, and occasionally our Coronado H-alpha scope, are set up for public solar viewing.

- Contributed by Benjamin Burress (BBurress@ChabotSpace.org)

#### At a Glance

	<u> </u>	
Solar Backpacks		
Activity Type	Public Outreach Informal Education	
Location	Oakland, California	
Outreach	125,000	
Participants	General Public	
Grade Levels	K-8	
Activity's Goals		
Student Support Education Outreach		
Partnerships		

SEC Connection: Improve the capacity of science centers, museums, and other institutions, through development of partnerships, to translate and deliver engaging NASA content.

Chabot Space and Science Center

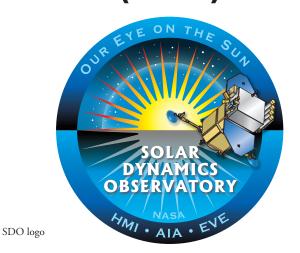
Solar-B Flier: 20,000 copies of the Solar-B Flier, "Countdown to Launch," were printed. 15,000 copies will be delivered to NASA/CORE for inclusion in the 2006 Sun Earth Day media package

For More Information on the Challenge: http://science.nasa.gov/ssl/pad/solar/solar-b\_brochure. stm

http://stp.gsfc.nasa.gov

# SDO PAGE 04 MISSION

# The Chesapeake Children's Museum (CCM)



The Chesapeake Children's Museum (CCM) exhibit that we've been working on is scheduled for completion by the 14th of October. The exhibit includes topics such as relative size and distance of Earth and Sun, the past and present study of the Sun, why we study the Sun, and Sun safety. The exhibit is located at 25 Silopanna Road, Annapolis, Maryland 21043. The museum phone number is 410-990-1993 and its e-mail address is info@theccm.org

This summer we had the pleasure of having as our intern Shae Hess Webber. During her internship Shae helped perfect and develop E/PO activities and content for the SDO website. She also helped with presentations to two groups of teachers, one group from Pennsylvania and the second a NASA Explorer School (NES).

Some of the projects she worked on included, interviewing SDO personnel for the CREW Members" section of the SDO E/PO website and development of "Who Wants to be a Millionaire" game on the Sun for the web and for use in outreach events. She also helped perfect the spectrum, sundial and Space Weather model activities. Her hard work and dedication was greatly appreciated and her work should be available online shortly.

- Contributed by Emilie Drobnes (emilie@ihy.gsfc.nasa.gov)

#### At a Glance

The Chesapeake Children's Museum (CCM)		
Activity Type	Public Outreach Informal Education Partnership	
Outreach TBD		
Participants	articipants General Public	
Grade Levels	1-6	
Location	Annapolis, Maryland	
Activity's Goals		
Education Outreach		
Partnerships		
The Chesapeake Children's Museum (CCM)		

SEC Connection: Improve the capacity of science centers, museums, and other institutions, through development of partnerships, to translate and deliver engaging NASA content.

For More Information on the Challenge: http://www.theccm.org http://stp.gsfc.nasa.gov http://sdo.gsfc.nasa.gov

# NASA STP/LWS **Informal Education** Workshop



The Information Education workshop's sharing session begins

The workshop was organized in order to discuss topics that are important to the informal education community focusing on the STP/LWS sciences. This workshop was as a result of our partnerships with the Marian Koshland Science Museum of the National Academy of Sciences. We had 50 participants from informal educational centers that will ultimately reach out to over a 100,000 people across the nation including Europe and Latin America. It was a two-day workshop on topics that are of concern to the education and science community, The workshop main goals were:

- The diversity of the community that exists in science education.
- Serving the underserved and underrepresented communities.
- Finding more efficient ways to support the formal and informal education connection.
- Creating an active network of informal science educators to works with STP/LWS.
  - Contributed by Omar Eaton (Omar.A.Eaton.1@gsfc.nasa.gov)

#### At a Glance

Informal Education Workshop	
Activity Type	Workshop
Participants	Formal Educators Public Outreach Informal Educators Scientists & Engineers
Outreach	125,000
Grade Levels	K-12, Undergraduate
Location	Washington, DC
Dates	09/21/05 - 09/22/05

#### Activity's Goals

Informal Educator Preparation & Enhancement Teacher/Facility Preparation & Enhancement Curriculum Support and Dissemination **Education Outreach** 

#### Partnerships

The Marian Koshland Science Museum of the National Academy of Sciences

#### Keynote Speaker

Dr. Art Poland, George Mason University, former project scientist at NASA

SEC Connection: Finding more efficient ways to support the formal and informal education connection and creating an active network of informal science educators to works with STP/LWS.

For More Information on the Workshop: http://stargazers.gsfc.nasa.gov

## **Cheyney University**



Cheyney University logo. Credit: Cheyney University, http://www.cheyney.edu/

STP/LWS and our partner school Cheyney University teamed to provide our Star Partners with a Professional Development Workshop from July 27-31, 2005. The participants spent two days at GSFC and two at Cheyney University in Cheyney, Pennsylvania. The workshop began with a welcome from Gilberto Colón, Associate Director/Program Manager for SEC GSFC followed by a liquid nitrogen demonstration by Dr. Nelson Reginald, and an overview of the Goddard Education Program by Dr. Antoinette Wells and Sonia Haley, LWS Master Teacher, giving a presentation on the Master Teacher Leadership and Mentor Program. Charles Mercer presented Connections between the E/PO Mission and K-12 Curriculum that is based on National Standards, and that was just the first day.

Day two began with a workshop on Educating Diverse Learners in the morning and a field trip to the Marian Koshland Science Museum of the National Academy of Sciences for a presentation on the museum. Next it was off to Cheyney University where they were greeted by Dr. Ayodele Aina and an overview of the next two days. The following is a list of the workshops presented by Dr. Aina and faculty: Problem Solving in Mathematics, Viewpoints; Logic, Definitions, Theorems and Proofs, Constructions, Ethnomathematics, and Pythagoras' Theorem. There was also a field trip to the Philadelphia Museum of Art to look at paintings that used mathematics to create works of art.

- Contributed by Mitch Waktins (Mitchell.Watkins.1@gsfc.nasa.gov)

#### At a Glance

Informal Education Workshop		
Activity Type	Formal Education	
Participants	Formal Educators Scientists and Engineers	
Outreach	7,500	
Grade Levels	K-12	
Location	Greenbelt, Maryland Cheyney, Pennsylvania	
Dates	07/27/05 - 07/31/05	

#### Activity's Goals

Teacher/Facility Preparation & Enhancement Curriculum Support and Dissemination Research and Development

#### **Partnerships**

Marian Koshland Science Museum Cheyney University NASA GSFC Educator Resource Center

#### Keynote Speaker

Gilberto Colón, Associate Director/Program Manager for SEC GSFC

For More Information on the Workshop: http://www.cheyney.edu http://stargazers.gsfc.nasa.gov

http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov

# **University of** Maryland **Upward Bound**



An example of a student poster presentation

The University of Maryland and LWS partnered for the second year to bring STEM subjects to Upward Bound students attending the 2005 summer session. Our partnership with the University of Maryland was expanded this year so that students could work with actual solar cells to study the most efficient way to configure them for maximum effectiveness during varied weather conditions. In addition to solar projects titled The Need for Speed, Solar Science Investigators and Solar Speed students also studied bacteria, atoms, skin cancer, and stem cell research.

At the conclusion of the program students presented their research to a panel of three judges and their peers to determine the best project and the best methodology used to prove or disprove their research hypothesis. A graduation ceremony was held for those students graduating high school and going on to college and information about our internships and NASA were shared with the students.

- Contributed by Mitch Waktins (Mitchell.Watkins.1@gsfc.nasa.gov)

#### At a Glance

Upward Bound		
Activity Type	Summer Program	
Participants	Students	
Outreach	50	
Grade Levels	9-12	
Location	College Park, Maryland	
Dates	Dates 06/20/05 - 07/29/05	

#### Activity's Goals

**Education Technology Education Outreach** 

#### Partnerships

University of Maryland College Park, Maryland **Upward Bound Program** 

#### General Information

Upward Bound is an educational program for first-generation and low-income students, seeking future careers in science or math from Maryland, DC, Virginia, Delaware, Pennsylvania, or West Virginia

SEC Connection: Motivate K-16+ students from diverse communities to pursue science and math courses, and ultimately, college degrees in science, technology, engineering, and mathematics. Improve higher education capacity to provide NASA's and the Nation's future science and technology workforce requirements.

For More Information on the Workshop: http://www.precollege.umd.edu http://stargazers.gsfc.nasa.gov http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov

# 2005 Our Star the Sun Summer Institute University of Puerto Rico



Gilberto Colón

This was the fifth year of the Summer Institute from July 8-15, 2005, with our partner the University of Puerto Rico, Mayagüez. Gilberto Colón, Associate Director/Program Manager for SEC GSFC opened the institute. Sixty teachers from across the country had the opportunity to learn solar science from presenters Dr. Art Poland, George Mason University, Dr. Don Michaels, Catholic University, and Dr. Juan G. González, University of Puerto Rico, Mayagüez. Topics were varied and included hands-on and classroom instruction on Introduction to the Sun-Earth Connection, Observing the Sun, The Magnetic Sun, Singapore Mathematics, and the Sun's effects on Coral Reefs and Mangroves.

Field trips to the Arecibo Observatory gave attendees the opportunity to get up close and personal with the radio telescope at Arecibo.

- Contributed by Mitch Waktins (Mitchell.Watkins.1@gsfc.nasa.gov)

#### At a Glance

2005 Our Star the Sun Workshop	
Activity Type	Workshop
Participants	Formal Educators Scientists/Engineers
Outreach	15,000
Grade Levels	K-12, Undergraduate
Location	University of Puerto Rico, Mayagüez, Puerto Rico
Dates	07/8/05 - 07/15/05

#### Activity's Goals

Student Support

Teacher/Facility Preparation and Enhancement Support for Systemic Improvement of Education

#### Partnerships

University of Puerto Rico, Mayagüez and Arecibo Observatory

#### Keynote Speaker

Gilberto Colón, Associate Director/Program Manager for SEC GSFC

SEC Connection: Enhance, science, technology, engineering, and mathematics instruction with unique teaching tools and experiences that only NASA can provide, that are compelling to educators and students.

"I wanted to thank you for the wonderful opportunity that you and your NASA community provided to me last week during the Sun-Earth Connection Program: Living With a Star in Mayagüez, Puerto Rico. Since I have gotten home, I have been working on ways to integrate the information that I received into the curriculum that I teach. I look forward to sharing these experiences with my students next year. You and your associates provided us with a truly wonderful experience. I can not thank you enough for all that you provided last week in Puerto Rico. The connections I made, the experiences I shared with others, and the information I learned are truly priceless. Thank you again for the great learning experience."

Dianna M. Raber , New Windsor, Connecticut

For More Information on the Workshop: http://stargazers.gsfc.nasa.gov http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov

# 2005 NASA/NRAO **Astronomy Institute**



Participants working on a workshop project

The 2005 NASA/NRAO Astronomy Institute took place for the fourth year in NRAO-Green Bank, WV, in fulfillment of the STP/LWS E/PO program plan. We had 20 K-12 teachers attend this years workshop. There were teachers from Maryland, Virginia, West Virginia, Washington DC, Springfield, Massachusetts, Chicago, Illinois and Salt Lake City, Utah. Each year the teachers get a crash course on stellar astronomy and train on how to use the 40 ft telescope. They split into small groups and are given projects that help them gain research experience using a professional telescope.

- Contributed by Omar Eaton (Omar.A.Eaton.1@gsfc.nasa.gov)

#### At a Glance

Informal Education Workshop		
Activity Type	Partnership	
Participants	Formal Educators	
Outreach	5,000	
Grade Levels	K-12	
Location	Green Bank, West Virginia	
Dates	07/24/05 - 07/30/05	

#### Activity's Goals

Teacher/Facility Preparation & Enhancement Curriculum Support and Dissemination Research and Development Student Support

#### Partnerships

National Radio Astronomy Observatory Green Bank, West Virginia

#### Keynote Speaker

Sue Anne Heatherly, NRAO Green Bank Education Director

SEC Connection: Enhance, science, technology, engineering, and mathematics instruction with unique teaching tools and experiences that only NASA can provide, that are compelling to educators and students.

"Hope your summer is going well. I just wanted to send you a note concerning the Green Bank Workshop I attended. IT WAS TERRIFIC! I never in my fondest dreams imagined I would ever be able to work with a real honest to goodness radio telescope, and reduce and interpret the data. I hope to use a lot of what I did and learned in my classroom."

Robert Staron - HS science teacher Springfield Science and Technology in Massachusetts

For More Information on the Workshop:

http://www.gb.nrao.edu

http://stargazers.gsfc.nasa.gov

http://stp.gsfc.nasa.gov

http://lws.gsfc.nasa.gov

# Science Technology Engineering Mathematics Workshop



Hard at work in St. Croix

A workshop was held for NASA STEM Administrators in St. Croix, US Virgin Islands, from August 15 – 19, 2005. The purpose of the workshop was to give administrators that had previously allowed their teachers to attend Our Star the Sun Summer Institute in Puerto Rico the opportunity to see how and why the Institute had proved so beneficial to their teachers. After an evening registration and a networking event where everyone had the opportunity to get to know one another participants retired to prepare for the next days events.

Gilberto Colón launched the program the following morning with the "The Sun-Earth Connection Program and Missions" overview and the workshop began. Among the 18 workshop themes were the Spectrometer Lab, Building a Solar Community, Sunspots, STEM Educational Resources, Solar System Math, Our Star the Sun, and websites that could be used for classroom activities. At the conclusion of the workshop the administrators were given an activity log to complete and return to Dr. Evelina Félicité-Maurice. The purpose of the log is to analyze their strengths, weaknesses, opportunities and threats (SWOT), to identify how their schools can contribute to the STP/LWS E/PO Program.

- Contributed by Mitch Waktins (Mitchell.Watkins.1@gsfc.nasa.gov)

#### At a Glance

2005 STEM Workshop		
Activity Type	Workshop	
Participants	Administrators	
Outreach	75,000	
Grade Levels	5-12	
Location	St. Croix, US Virgin Islands	
Dates	08/15/05 - 08/19/05	

#### Activity's Goals

Student Support
Curriculum Support & Dissemination
Teacher/Facility Preparation & Enhancement
Research & Development

#### Keynote Speaker

Gilberto Colón, Associate Director/Program Manager for SEC GSFC

SEC Connection: Enhance, science, technology, engineering, and mathematics instruction with unique teaching tools and experiences that only NASA can provide, that are compelling to educators and students.

"I want to express my deepest appreciation to you and your workshop staff for an excellent workshop. Also, I want to express my appreciation to all the workshop participants for sharing, caring, and energizing. The team work and dedication to children is spot on! I have spoken with several principals and teachers and we will open up dialogue and joint activities via the internet" Dr. Daniel Stabile, Catholic Holy Redeemer School

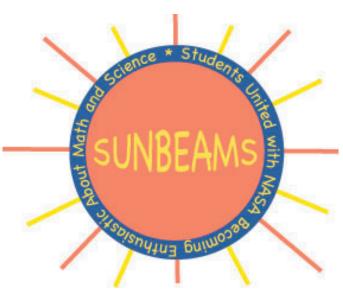
For More Information on the Workshop: http://stargazers.gsfc.nasa.gov http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov



Differentiating Science activity

# SCHOOLS PAGE 11

### **SUNBEAMS**



SUNBEAMS logo

The SUNBEAMS (Students United with NASA Becoming Excited about Math and Science) program was held for four weeks this summer here at GSFC. This the eighth year of the program included five teachers that were mentored by scientists and engineers to enhance the work they do in the classroom. Upon completion of the program the teachers develop lesson plans that they pilot at their school and include on the SUNBEAMS website. During the next year the teachers bring 30 students to GSFC NASA for a one week immersion in Math and Science. Sarah E. Brown, Program Coordinator, is looking forward to working with the students of this years teachers.

- Contributed by Mitch Waktins (Mitchell.Watkins.1@gsfc.nasa.gov)

#### At a Glance

SUNBEAMS		
Activity Type	Internship	
Participants	Formal Educators	
Outreach	12,500	
Grade Levels	K-12	
Location	NASA/GSFC	
Dates	ates 07/18/05 - 08/12/05	
Partnerships		
DC Public Schools and Alexandria Public Schools		

SEC Connection: Enhance, science, technology, engineering, and mathematics instruction with unique teaching tools and experiences that only NASA can provide, that are compelling to educators

For More Information on the Workshop: http://space.gsfc.nasa.gov/sunbeams http://stargazers.gsfc.nasa.gov http://stp.gsfc.nasa.gov http://lws.gsfc.nasa.gov

and students.

# **NASA GSFC STP/LWS Summer Internship Program**



The interns on a field trip to the National Academy of Sciences Marian Koshland



The college interns during their orientation

The STP/LWS Summer Internship offers an opportunity to students to contribute directly to NASA Goddard Space Flight Center's (GSFC) missions. We pair up students with a variety of professionals that help support the Sun Solar System Connection program. The Summer Internship Program was established for the benefit of high school and undergraduate college students interested in degrees in engineering and space science to provide internship experience. We also provide opportunities in supporting offices like Education & Public Outreach, Finance, Business and Public Affairs. The program is intended to encourage students to both pursue and earn engineering and space science degrees and to enhance their interest in careers at GSFC by exposing them to its professional resources and facilities.

- Contributed by Omar Eaton (Omar.A.Eaton.1@gsfc.nasa.gov)

#### At a Glance

2005 Summer Internships		
Activity Type	Internship	
Outreach	16	
Grade Levels	9-12, Undergraduate	
Participants	Formal Educators Public Outreach Scientists/Engineers	
Location	Greenbelt, Maryand	
Dates	05/31/05 - 08/25/05	
Activity's Goals		

Student Support **Education Technology Education Outreach** 

SEC Connection: Improve higher education capacity to provide NASA's and the Nation's future science and technology workforce requirements.

"Like last year summer was great for me. Every year, the number of new experiences and great moments was increasing. At the same time having fun, I could reach some personal and educational goals...(The) DC trip was a great addition to the summer program"

Giancarlo Vera, NASA STP/LWS Intern 2003-2005

For More Information on the Internship program: http://stargazers.gsfc.nasa.gov



Intern Giancarlo Vera with mentor Sarah E. Brown



The interns on a field trip to the Smithsonian National Museum of the Native American

#### 2005 National Space & Missile Materials Symposium (NSMMS) held in Las Vegas, Nevada from June 27

- July 1. This is the premier forum for system engineers, designers, scientists, and managers concerned with the critical challenges of materials and processing for space and missile technology.

http://www.usasymposium.com/nsmms Attendee: Space Environment TestBeds

2005 IEEE Nuclear and Space Radiation Effects

Conference held in Seattle, Washington from July 11-15, 2005. This is the annual meeting of engineers and scientists to present the latest techniques for enhancing the performance of microelectronic devices and circuits that are used in radiation environments.

http://www.nsrec.com

Attendee: Space Environment TestBeds

World Council for Gifted and Talented Children held in New Orleans, Louisiana from August 6 - 10, 2005. This international conference put its focus this year on Uniting Children Around the World Through Technology. Participants came from all over the world including Argentina, Austria, Belgium, China, Indonesia, Iran, Israel, Jordan, and along with many others. http://www.worldgifted.org

ONFERENC Attendee: STP/LWS Education & Public Outreach

> **RADECS 2005** held in the Palais des Congres, Cap d'Agde, France from September 19-23, 2005. The meeting featured oral and poster presentations describing recent observations, results, and developments concerning radiations effects on materials, electronic components, and systems. http://www.radecs.org

Attendee: Space Environment TestBeds

Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) held in Denver, Colorado from September 29 - October 2, 2005. The

conference's focus is to increase the Native American and Chicano advancement in the sciences.

http://www.sacnas.org

Attendee: STP/LWS Education & Public Outreach

#### UPCOMING CONFERENCE

National Association for the Education of Young Children Conference held in Washington, DC from December 7-10, 2005. This conference allows scholars and practitioners, experts and interns, participants in every aspect of the Early Childhood Education field to gather and learn from one another

http://naeyc.org/conferences

Attendee: STP/LWS Education & Public Outreach

Conferences Overview		
Activity Type	Conferences	
Schools Reached	5,000	
Outreach	50,000	
Grade Levels	K-12, University	
Goal of Activity	Public Outreach	



The illustration shows the impact that the following 2005 programs have had on educators, students and the communities they work and live in.

#### **Upcoming Events**

Deadline for final projects in the Space Weather Science

November 1 - 30, 2005 Space Weather Month

Public Outreach Events: Workshops, webcast, and

Visitor Center, NASA/GSFC

January 6 - 10, 2006 Pre-Service Workshop Mayagüez, Puerto Rico

January 11 - 13, 2006 In-Service Workshop Springfield, Massachusetts

April 8 - 13, 2006 MTLM Workshop St. Croix, US Virgin Islands

> Window to the Sun is published quarterly by Solar Terrestrial Probes & Living With a Star program office (Code 400) at the Goddard Space Flight Center in Greenbelt, Maryland. The newsletter describes the education and public outreach program activities & missions outreach. If you wish to be placed on the newsletter distribution list or if you want more information about how to submit articles, contact: Mitch Watkins

Editor

(301) 286-0806

Mitchell.Watkins.1@gsfc.nasa.gov

#### STP web stats for January 2005 to September 2005

- Pages hit 174,624 (Any HTML document would be considered a page.) Some people consider this number as the number of 'pure' hits.
- Hits 1,008,706 (Any request to the server which is logged is considered a hit: html, graphic, audio or movie file)
- Files requested 763,717 (Any request to the server that requires the server to send back items: html, graphics, audio, or movie files)
- Most hit page for September: stereo.htm

#### LWS web stats for January 2005 to September 2005

- Pages hit 93,811 (Any HTML document would be considered a page.) Some people consider this number as the number of 'pure' hits.
- Hits 539,225 (Any request to the server which is logged is considered a hit: html, graphic, audio or movie file)
- Files requested 409,383 (Any request to the server that requires the server to send back items: html, graphics, audio, or movie files)
- Most hit page for September: lws science.htm

#### EPO web stats for January 2005 to September 2005

- Pages hit 200,418 (Any HTML document would be considered a page.) Some people consider this number as the number of 'pure' hits.
- Hits 1,547,353 (Any request to the server which is logged is considered a hit: html, graphic, audio or movie file)
- Files requested 1,234,088 (Any request to the server that requires the server to send back items: html, graphics, audio, or movie files)
- Top 5 most hit pages for September:
  - 1. Student Section:

how\_astronomers\_sp.htm (Spanish)

- 2. Student Section:
- electromagnetic spectrum sp.htm (Spanish)
- 3. Student Section: science fair sp.htm (Spanish)
- 4. Educators Section:
- sw\_challenge\_overview.htm (English)
- 5. Student Section: students\_sp.htm (Spanish)